Message

From: Levey, Brian [BLevey@hunton.com]
Sent: 2/22/2025 1:59:35 AM
To: Kramer, Jessica L. [kramer.jessical@epa.gov]; Donahue, Sean [donahue.sean@epa.gov]
CC: Turner, Andrew [aturner@hunton.com]
Subject: FW: UWAG Petition for Rulemaking to Reconsider and Administratively Stay the 2024 ELG Rule
Attachments: UWAG Petition for Rulemaking to Reconsider and Administratively Stay the 2024 ELG Rule (Feb. 21, 2025)-c.pdf

Jess and Sean,

FYI, this evening the Utility Water Act Group (UWAG) submitted the attached petition for rulemaking to EPA. See correspondence below.

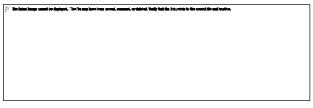
Thank you,
-Brian

From: Levey, Brian
Sent: Friday, February 21, 2025 8:51 PM
To: 'Zeldin.Lee@epa.gov' <Zeldin.Lee@epa.gov>
Cc: 'payne.james@epa.gov' <payne.james@epa.gov>; 'best-wong.benita@epa.gov' <best-wong.benita@epa.gov>; 'Benware, Richard' <Benware.Richard@epa.gov>; 'covington.james@epa.gov' <covington.james@epa.gov>; Turner, Andrew <aturner@hunton.com>
Subject: UWAG Petition for Rulemaking to Reconsider and Administratively Stay the 2024 ELG Rule

Administrator Zeldin,

Please find attached the Utility Water Act Group's (UWAG's) Petition for Rulemaking to Reconsider and Administratively Stay EPA's final rule titled "Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category," 89 Fed. Reg. 40,198 (May 9, 2024).

Thank you,
-Brian



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FILE NO: 029142.0070345

February 21, 2025

Via U.S. Mail and E-Mail

The Honorable Lee M. Zeldin, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Zeldin.Lee@epa.gov

Re: Utility Water Act Group's Petition for Rulemaking to Reconsider and Administratively Stay EPA's "Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule," 89 Fed. Reg. 40,198 (May 9, 2024), Docket No. EPA-HQ-OW-2009-0819

Dear Administrator Zeldin:

Enclosed please find the Utility Water Act Group's Petition for Rulemaking to Reconsider and Administratively Stay EPA's final rule titled "Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category," 89 Fed. Reg. 40,198 (May 9, 2024).

Please contact me if you have any questions about the petition.

Sincerely,

Brian R. Levey

Brian R. Levey

Enclosures

cc: James (Jim) Payne (payne.james@epa.gov)
Benita Best-Wong (best-wong.benita@epa.gov)
Richard Benware (benware.richard@epa.gov)
James Covington (covington.james@epa.gov)

Before the United States Environmental Protection Agency

Utility Water Act Group's Petition for Rulemaking to Reconsider and Administratively Stay the Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule, 89 Fed. Reg. 40,198 (May 9, 2024) Docket No. EPA-HQ-OW-2009-0819

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February 21, 2025

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RELIEF SOUGHT

The Utility Water Act Group (UWAG)[1] hereby petitions the United States Environmental Protection Agency (EPA or the Agency) pursuant to 5 U.S.C. § 553(e) for a rulemaking to reconsider and repeal the Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule (the Final Rule, Rule, or 2024 ELG Rule).[2] In the interim, UWAG requests an administrative stay of the Rule pursuant to 5 U.S.C. § 705 because the Rule is currently in litigation,[3] and "justice so requires."[4] Furthermore, EPA should take all other administrative actions necessary to assure immediate suspension or delay of the Rule's compliance deadlines while EPA works to reconsider and revise, as appropriate, the substantive requirements of the current Rule pursuant to notice-and-comment rulemaking.

Specifically, UWAG requests that EPA take the following actions:

- Initiate a review of the determinations underlying the 2024 ELG Rule.
- Take immediate action to postpone the Compliance Dates[5] in the 2024 ELG Rule via:
    - An administrative stay pending judicial review under 5 U.S.C. § 705.
    - Rulemaking to permanently postpone the 2024 ELG Rule Compliance Dates.

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[1] UWAG is a voluntary, non-profit, unincorporated group of 134 individual energy companies, the American Public Power Association, and the National Rural Electric Cooperative Association.

[2] 89 Fed. Reg. 40,198 (May 9, 2024), EPA-HQ-OW-2009-0819-10167. Section 553(e) provides interested persons a "right to petition for the issuance, amendment, or repeal of a rule."

[3] *Sw. Elec. Power Co. v. EPA*, No. 24-2123(L) (8th Cir.) (consolidating nine separate Petitions for Review) (ELG Litigation).

[4] 5 U.S.C. § 705. An administrative stay under 5 U.S.C. § 705 should postpone all deadlines in the Rule. The length of the stay should be calculated based on the number of days between the date the first petition for review was filed in a federal court of appeals (May 23, 2024) and the later of the conclusion of judicial review or any further rulemaking undertaken as a result of that litigation or reconsideration undertaken in response to this petition.

[5] The term "Compliance Dates" includes not only the deadlines to comply with the limits at 40 C.F.R. §§ 423.13 and 423.16 but also the deadline to submit a Notice of Planned Participation (NOPP) to qualify for the 2034 permanent cessation of coal combustion subcategory at 40 C.F.R. § 423.19(h).

- Initiate rulemaking to reconsider the 2024 ELG Rule's determination that zero discharge technology is "available" and "economically achievable" to treat flue gas desulfurization (FGD) wastewater and combustion residual leachate.
- Repeal the 2024 ELG Rule or make substantive revisions to the Rule to correct the errors described in this petition.

INTRODUCTION

I. EPA Should Reconsider the Rule

UWAG petitions EPA to reconsider the Rule to address its numerous flaws. The 2024 ELG Rule reverses course on wastewater treatment technology mandated just four years earlier by EPA's 2020 ELG Rule,[6] requiring the installation of unworkable technology and wasting billions spent by the utility industry in good faith on technology needed to meet the 2020 Rule. Adding to the substantial costs to install new equipment and systems required by the 2020 Rule, the 2024 ELG Rule imposes tremendous new costs to install unproven and economically unachievable membrane and evaporator systems that cannot keep up with large volumes of wastewater that baseload power plants generate, stranding technology assets just installed by utilities to comply with the 2020 Rule. The 2024 Rule's looming compliance deadlines are about to force companies to either invest in infeasible technologies, spending billions in added costs that will be passed on to consumers, creating a drag on the U.S. economy, and undercutting the supply of reliable and affordable electricity, or elect to retire coal plants prematurely, at a time of unprecedented load growth and insufficient replacement generation alternatives.

The 2024 ELG Rule also violates Congress's direction in the Clean Water Act (CWA) that ELG limits must be based on "available" and "economically achievable" technology. 33 U.S.C. § 1311(b). Membrane technologies are prone to rapid fouling that renders them

[6] Steam Electric Reconsideration Rule, 85 Fed. Reg. 64,650 (Oct. 13, 2020), EPA-HQ-OW-2009-0819-8491 (2020 ELG Rule or 2020 Rule).

unsuitable for high flow volumes and have never been relied on by U.S. power plants at full operational scale, and none of the pilot studies or unique applications cited by EPA prove availability. Volume reduction technologies (such as evaporation systems) can keep up with baseload power plant flows only in unique circumstances and are currently not available industry-wide.

Finally, EPA substantially underestimated the costs to install and operate the systems required by the 2024 ELG Rule despite previously demonstrated flaws in its cost model—the same flaws that led EPA to underestimate *by an order of magnitude* the costs of the 2020 Rule.

U.S. electric power demand is substantially increasing, and the economy needs a reliable and affordable electric grid. EPA's 2024 ELG Rule threatens those national economic and security interests. The 2024 ELG Rule also threatens the orderly transition of company fleets to newer and cleaner sources of electricity by rendering obsolete rather than making full use of recent technological investments required by EPA's 2020 Rule, thereby wasting economic resources. The 2024 ELG Rule is part of a suite of regulations issued by the Biden Administration targeting coal power plants that, together, represent a regulatory strategy to force the premature retirement of dependable baseload power. The 2020 Rule made tremendous improvements in power plant wastewater treatment, and those environmental benefits will continue if EPA provides relief from the unreasonable deadlines and unworkable requirements imposed by the 2024 ELG Rule.

II. Reconsideration Is Supported by the Policies Established by Executive Order

The current administration has put forth a number of policies that together seek to "unleash America's affordable and reliable energy."[7] It is the policy of the Administration "to

[7] *See* Exec. Order No. 14154, *Unleashing American Energy* (Jan. 20, 2025), 90 Fed. Reg. 8353 (Jan. 29, 2025) (Unleashing American Energy EO).

protect the United States's economic and national security and military preparedness by ensuring that an abundant supply of reliable energy is readily accessible in every State and territory of the Nation" and "ensure that all regulatory requirements related to energy are grounded in clearly applicable law." Unleashing American Energy EO § 2(c), (d). Reconsideration of the 2024 ELG Rule is essential to fulfill these policies.

The Unleashing American Energy EO directs agencies to identify regulations "that impose an undue burden on the identification, development, or use of domestic energy resources—with particular attention to oil, natural gas, coal, hydropower, biofuels, critical mineral, and nuclear energy resources." Unleashing American Energy EO § 3(a). For all the reasons set forth in this petition, and because the Rule hinders the generation of reliable and affordable electricity, EPA should include the 2024 ELG Rule on its list of regulations to "suspend, revise, or rescind." *Id.* § 3(b).

Reconsidering and potentially repealing the Rule would also support the Agency's compliance with Executive Order 14192, popularly known as the "Ten-for-One Order."[8] In addition to its other directives, the Ten-for-One Order requires agencies to achieve a net incremental regulatory cost of "significantly less than zero," in Fiscal Year 2025. Ten-for-One Order § 3(b). The costs of new regulations during the current fiscal year are offset by costs eliminated from existing regulations: "any new incremental costs associated with new regulations shall, to the extent permitted by law, be offset by the elimination of existing costs associated with at least 10 prior regulations." *Id.* § 3(c).

[8] *See* Exec. Order No. 14192, *Unleashing Prosperity Through Deregulation* (Jan. 31, 2025), 90 Fed. Reg. 9065 § 3 (Feb. 6, 2025) (Ten-for-One Order) ("[W]henever an executive department or agency (agency) publicly proposes for notice and comment or otherwise promulgates a new regulation, it shall identify at least 10 existing regulations to be repealed."). Rulemaking to repeal the 2024 ELG Rule, and to extend the Rule's deadlines in support of such a repeal, would reduce rather than add to new regulatory burdens and should not require identification of ten other rules for repeal in order to proceed under Executive Order 14192.

By reconsidering and repealing the 2024 ELG Rule, and taking its costs properly into account, EPA can discharge this obligation. In carrying out its duties under the Ten-for-One Order, the Agency must comply with the Administrative Procedure Act (APA) and other applicable law. *Id.* § 6(a). Granting this petition would enable EPA to promote the express policy of the Order to reduce undue regulatory burdens consistent with the APA.

PENDING ELG LITIGATION

The Final 2024 ELG Rule was published on May 9, 2024. Various petitioners filed nine petitions for judicial review of the Rule in multiple courts.[9] The petitions were consolidated in the United States Court of Appeals for the Eighth Circuit.[10] The Utility and State Petitioners (including UWAG as a utility petitioner) and Environmental Petitioners filed their opening briefs on November 7, 2024. EPA filed its response brief on January 17, 2025. Intervenors' briefs are due February 28, 2025 and Petitioners' reply briefs are due March 21, 2025.

REASONS TO RECONSIDER AND REPEAL THE RULE

I. Introduction

After the Biden administration took office, EPA launched a multi-front attack on coal-fired electricity generation. In 2022, the Supreme Court said EPA could not mandate a shift from coal to other power sources because, without clear statutory authorization, such major questions are reserved for Congress. *West Virginia v. EPA*, 597 U.S. 697 (2022). Yet EPA

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[9] *Ctr. for Biological Diversity v. EPA et al.*, No. 24-3294 (9th Cir. filed May 23, 2024); *Catawba Riverkeeper et al. v. EPA et al.*, No. 24-1483 (4th Cir. filed May 28, 2024); *West Virginia et al. v. EPA et al.*, No. 24-11702 (11th Cir. filed May 28, 2024); *Clean Water Action et al. v. Regan et al.*, No. 24-1167 (D.C. Cir. filed May 30, 2024); *NRG Texas Power et al. v. EPA et al.*, No. 24-60268 (5th Cir. filed May 30, 2024); *Sw. Elec, Power Co. et al. v. EPA et al.*, No. 24-2123 (8th Cir. filed May 30, 2024); *City Utils. of Springfield, MO by & through the Bd. of Pub. Utils. v. EPA et al.*, No. 24-2215 (8th Cir. filed June 13, 2024); *America's Power v. EPA et al.*, No. 24-2494 (8th Cir. filed July 19, 2024); *City of Springfield, Office of Pub. Utils., d/b/a City, Water, Light & Power v. EPA et al.*, No. 24-2626 (7th Cir. filed Sept. 18, 2024).

[10] Consolidation Order, *In re Envtl. Prot. Agency, Suppl. Effluent Limitations Guidelines & Standards for the Steam Elec. Power Generating Point Source Category, 89 Fed. Reg. 40198, Published on May 9, 2024*, MCP No. 187 (J.P.M.L. June 14, 2024).

pressed ahead with a "cross-office power sector strategy" to impose significant new regulatory burdens on coal-fired generation,[11] even if it meant reversing recent rules, squandering investments spurred by those rules, threatening the electric grid's reliability, and increasing electricity costs to Americans.[12]

The 2024 ELG Rule was one product of EPA's strategy: a rule that requires utilities to install costly technologies—membrane systems, thermal evaporators, or spray-dry evaporators—that are unavailable and have not been proven effective to treat upwards of 1.8 million gallons *per day* of wastewater that baseload power plants generate.[13] Congress directed that EPA base its ELG rules on limits that can be achieved through use of technology that is both "available" and "economically achievable." 33 U.S.C. § 1311(b)(2)(A). The three technologies on which EPA bases the Rule are neither, which EPA acknowledged in 2020 when it set ELGs based on a different (but still quite costly) set of technologies. But EPA's reasoned 2020 conclusions took a back seat to the cross-office strategy, which favored ratcheting up regulatory burdens for coal-fired generation.

The Rule is unlawful for many reasons, described in more detail below. First, EPA's interpretation of the word "available" is contrary to its plain meaning and ignores real and

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[11] Utility and State Pet'rs' Mot. for a Stay Pending Review, *Sw. Elec. Power Co. v. EPA*, No. 24-2123(L) (8th Cir. July 26, 2024) ("Pet'rs' Stay Mot."), Ex. 8, Memorandum from Radhika Fox, OW, EPA, Briefing Memo, Memorandum for the Administrator, Steam Electric Reconsideration Option Selection at 1, (June 29, 2021), FOIA EPA-2022-003242, Response Documents 2, ED_006652_00039279-00001, ECF No. 5417837.

[12] Indeed, the 2024 ELG Rule was just one of four major rules targeting coal-fired electricity generation that EPA issued in the same week. *See* Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, 89 Fed. Reg. 39,798 (May 9, 2024); Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Legacy CCR Surface Impoundments, 89 Fed. Reg. 38,950 (May 8, 2024); National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review, 89 Fed. Reg. 38,508 (May 7, 2024).

[13] *See* EPRI Comments at 11–12, Tbl. 1-2 (May 26, 2023), EPA-HQ-OW-2009-0819-10047 (providing EPA's estimated FGD purge flow rates for the 22 plants that it predicts would need to comply with FGDW zero discharge requirements). Based on EPA's estimates, the 22 facilities would produce on average 540,000 gpd, with some facilities, for example, producing 1.2, 1.4, 1.6, and 1.8 million gpd. This is equivalent to evaporating multiple Olympic-sized swimming pools (which generally contain approximately 660,000 gallons) per day.

persistent impediments to implementing these technologies. Second, EPA persisted in using the same cost-projection model it used in 2020, even though that model materially underestimated 2020 compliance costs, and compounded that error by relying on the same flawed model to analyze the 2024 ELG Rule, including by underestimating the utility industry's sunk costs from the 2020 Rule. Third, EPA issued an ELG limit for a new waste stream category—leachate releases through groundwater—without conducting the technological or economic analyses required to establish an ELG limit for this new category. Finally, EPA failed to properly apply the CWA or its regulations in establishing pretreatment standards for discharges of pollutants through municipal wastewater systems. For all these reasons, EPA should conduct rulemaking to reconsider the 2024 ELG Rule.

II. The CWA's Requirements for ELGs

The CWA prohibits the discharge of "pollutant[s]" from "point sources" into waters of the United States unless authorized. 33 U.S.C. § 1311(a), (b). Facilities discharging wastewater must obtain a permit setting limits on discharges of pollutants. *Id.* § 1342. Those limits can be based on the amount of a pollutant the receiving water can handle without violating water quality standards, *id.* §§ 1312, 1342, and on the amount that can be discharged if the facility uses certain technology. *Id.* §§ 1314, 1342; *see Texas Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 927 (5th Cir. 1998). The 2024 ELG Rule involves technology-based limits.

Permit writers do not set technology-based limits in a vacuum. Instead, EPA must periodically establish ELGs for "classes and categories of point sources." *See, e.g.*, 33 U.S.C. § 1314(b). The CWA prescribes different standards for setting ELGs based on, among other things, the facilities' age and whether they discharge to publicly owned treatment works or directly to waters of the United States. *See id.* §§ 1311(b), 1314(b), 1316(b)-(c); *see also Sw. Elec. Power Co. v. EPA*, 920 F.3d 999, 1006 (5th Cir. 2019).

Here, the standard applicable to existing power plants requires EPA to base ELGs on limits attainable through use of the "best available technology economically achievable" (BAT). 33 U.S.C. §§ 1311(b)(2)(A), 1314(b)(2).[14] To qualify as BAT, a technology must be both "available" and "economically achievable." *See Texas Oil*, 161 F.3d at 928. EPA must consider several factors, including "the cost of achieving such effluent reduction," to determine whether a technology satisfies those statutory requirements. 33 U.S.C. § 1314(b)(2)(B).

Congress envisioned that, as technology evolved, ELGs would "result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants." *Id.* § 1311(b)(2)(A). But Congress empowered EPA to eliminate discharges only after finding "such elimination is technologically *and* economically achievable for a category or class of point sources." *Id.* (emphasis added). Moreover, when identifying "control measures and practices available to eliminate the discharge of pollutants," EPA must "tak[e] into account the cost of achieving" complete elimination of the discharge of pollutants. *Id.* § 1314(b)(3).

The CWA also provides for the establishment of pretreatment standards for pollutants in wastewater that industrial users (e.g., utilities) discharge to Publicly Owned Treatment Works (POTWs). 33 U.S.C. § 1317(b); 40 C.F.R. Pt. 403. Specifically, EPA establishes pretreatment standards for pollutants it determines are not "susceptible to treatment" by the POTW or those that "interfere with the operation of" the POTW. 33 U.S.C. § 1317(b). In general, a POTW must develop a pretreatment program in accordance with the EPA's guidelines, and industrial users of the POTW must comply with such requirements. *See* 40 C.F.R. § 403.8.

[14] A more stringent standard applies to new power plants, which can be designed with advanced treatment technologies in mind. *See* 33 U.S.C. § 1316(a)(1); *see also Sw. Elec. Power Co.*, 920 F.3d at 1007 n.7.

III. ELG Rulemakings Addressing the Steam Electric Utility Sector

Coal-fired plants typically require high volumes of water to manage not just the ash left after combustion but also pollutants removed from their exhaust by air emission control technology. This wastewater has unique chemistry, so treating it is challenging, especially at existing plants, where these systems must be retrofitted.

A. 2015 ELG Rule

In 2015, EPA issued a final rule revising power plant ELGs.[15] That rule addressed two waste streams directly relevant here—(i) flue gas desulfurization wastewater (FGDW), and (ii) combustion residual leachate (CRL)—as well as a number of other waste streams (e.g., bottom ash transport water (BATW)).[16] FGDW is produced by spraying a sorbent slurry to facilitate a reaction where sulfur dioxide is removed from exhaust gas and taken away in the slurry water.[17] CRL is produced when coal-combustion and treatment byproducts (e.g., combustion residuals or ash) interact with water that percolates through or drains from landfills.[18]

EPA considered several treatment technologies that might reduce or eliminate these waste streams. EPA concluded that systems using chemical precipitation to facilitate physical removal of pollutants in solids, coupled with biological systems that introduced microorganisms to consume and transform certain pollutants, were BAT for treating FGDW.[19] EPA found the technologies were available. And, although expensive (costing about $10 billion industry-wide across all waste streams), EPA concluded they were economically achievable.[20]

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[15] 80 Fed. Reg. 67,838 (Nov. 3, 2015), EPA-HQ-OW-2009-0819-5558.
[16] *Id.* at 67,846.
[17] *See id.*
[18] *See* 40 C.F.R. § 423.11(r).
[19] 80 Fed. Reg. at 67,850.
[20] *Id.* at 67,841.

EPA also evaluated "thermal evaporators." Those systems—sometimes called "brine concentrators"—concentrate wastewater by flowing a thin film of wastewater down heated tubes to evaporate water.[21] But the Agency concluded these systems were much too expensive—more than 2.5 times the cost of the selected technologies—and thus did not satisfy the statute's definition of BAT.[22]

B. 2020 ELG Rule

In 2017, EPA announced it would reconsider the 2015 ELGs for FGDW and BATW.[23] The Agency was concerned about the cost of implementing the technologies selected to meet the ELGs it set for those waste streams. It also wanted to consider whether plants could scale up "membrane" technology, which use a semi-permeable filter to remove a broad range of particulate and dissolved pollutants,[24] to treat high-volume waste streams at power plants to achieve zero liquid discharge of some pollutants.[25] Because reconsideration might make investments to implement the 2015 Rule unnecessary, the Agency postponed 2015 Rule compliance deadlines.[26]

EPA once again concluded that systems using a combination of chemical and biological treatment systems to facilitate physical removal of pollutants were BAT for FGDW, although it identified a more cost-effective method for the systems' biological component. And, as before, EPA estimated utilities would spend billions of dollars to comply with the new FGDW limits

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[21] *Id.* at 67,853.

[22] *Id.* at 67,850 n.21.

[23] 82 Fed. Reg. 43,494 (Sept. 18, 2017), EPA-HQ-OW-2009-0819-7080.

[24] EPA, EPA-821-R-24-004, Technical Development Document for Final Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at 25-26 (Apr. 2024), EPA-HQ-OAR-2009-0819-10337 (2024 TDD).

[25] EPA, EPA-821-R-20-001, Supplemental Technical Development Document for Revisions to the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at 4-4 to 4-5 (Aug. 2020), EPA-HQ-OW-2009-0819-8935 (2020 Suppl. TDD).

[26] 82 Fed. Reg. 43,494, 43,496 (Sept. 18, 2017), EPA-HQ-OW-2009-0819-7080. Later the Fifth Circuit vacated provisions of the 2015 Rule. *See Sw. Elec. Power Co. v. EPA*, 920 F.3d 999 (5th Cir. 2019) (vacating the 2015 limits for CRL and legacy wastewater).

based on those advanced control systems.[27] With limited exceptions, it required facilities to comply no later than December 31, 2025.

In 2020, EPA "carefully consider[ed]" and "reject[ed] membrane filtration" as BAT.[28] First, "significant information gaps and uncertainties in EPA's record" precluded a finding that membrane filtration is technologically available to treat high volumes of steam electric wastewater nationwide.[29] Second, "membrane filtration entails unacceptable non-water quality environmental impacts associated with management of the membranes' byproduct, brine." And third, "membrane filtration would result in higher costs to industry."[30]

Also, as it did in the 2015 Rule, EPA rejected thermal evaporation technologies as the basis for BAT limits for FGDW because of especially high costs.[31] EPA found thermal technologies were 2.4 times the cost of chemical and biological systems, and 1.04 times the excessively high cost of membrane filtration.[32] And, like membrane systems, "thermal technologies have unacceptable non-water quality environmental impacts associated with management of the resultant brine."[33]

EPA did not consider spray dry evaporators (SDEs) as a standalone system. SDEs spray fine misted wastewater into hot gases, such as a slipstream of flue gas from the plant's boiler or an external natural gas burner.[34] In 2015, EPA noted that SDEs might be used in conjunction

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[27] EPA, EPA-821-R-20-004, Regulatory Impact Analysis for Revisions to the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at 3-9, Tbl. 3-2 (Aug. 28, 2020), EPA-HQ-OW-2009-0819-8908.

[28] 85 Fed. Reg. at 64,663.

[29] *Id.*

[30] *Id.*

[31] *Id.* at 64,668.

[32] *Id.* at 64,669.

[33] *Id.*

[34] 2020 Suppl. TDD at 4-6 to 4-7.

with thermal evaporators but did not consider them BAT.[35] And it did not deviate from that conclusion in 2020, noting correctly that retrofitting SDEs at existing power plants posed complicated engineering challenges.[36]

While EPA projected that the costs to comply with its 2020 ELGs would be substantial, later evidence revealed that EPA drastically underestimated those costs. For example, EPA estimated it would cost about $13 million in capital costs to install biological treatment at one plant.[37] In reality, it cost $48 million.[38] At a different plant, EPA estimated approximately $28.6 million in capital costs to install a compliant treatment system,[39] while it actually cost "nearly $110 million."[40]

These substantial underestimates were really no surprise because utility experts tasked with designing and implementing such systems detailed why EPA's cost model was flawed in comments on the 2020 Rule. For one thing, EPA used the wrong "flow" figure for sizing equipment, using "average" flow instead of "peak" flow.[41] For another, EPA underestimated the cost to install equipment by systematically discounting "balance of plant" factors—i.e., the cost associated with site preparation, bonding and insurance, and tie-in of vendor equipment.[42] Finally, EPA underestimated the redundancies needed to simultaneously maintain grid reliability

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[35] EPA, EPA-821-R-15-007, Technical Development Document for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at 7-17 (Sept. 2015), EPA-HQ-OW-2009-0819-6432 (2015 TDD).

[36] 2020 Suppl. TDD at 4-6 to 4-7.

[37] Memorandum from Eastern Research Group, Inc. to Steam Electric Rulemaking Record re: Generating Unit-Level Costs and Loadings Estimates by Regulatory Option – DCN SE08638 at 22–29, Tbl.4 (FGD Wastewater Treatment Regulatory Option A) (Aug. 31, 2020), EPA-HQ-OW-2009-0819-8934 (ERG Memo).

[38] Direct Testimony of Brian D. Sherrick on behalf of Appalachian Power Company and Wheeling Power Company, at Company Exhibit BDS-D3 (W. Va. PSC undated) (Sherrick Direct Testimony).

[39] ERG Memo at 22-29, Tbl. 4 (FGD Wastewater Treatment Regulatory Option A).

[40] Southern Company Comments at 26 (May 30, 2023), EPA-HQ-OW-2009-0819-10073_Att. 1 (Southern Company 2023 Comments).

[41] EPRI Comments at 2-2 to 2-3 (Jan. 20, 2020), EPA-HQ-OW-2009-0819-8293.

[42] *Id.* at 2-3 to 2-7.

(e.g., during unit maintenance outages) and ensure full compliance with the applicable discharge limits.[43] EPA ignored all of these flaws in its cost modeling.

C. 2024 ELG Rule

Less than a year after EPA published the 2020 ELG Rule, in August 2021, EPA announced it would revise the 2020 Rule, most notably its conclusions regarding membrane technology.[44] But the key facts were unchanged. There were no technological breakthroughs. And the cost of membrane technology was still exorbitant.

Still, the new Administration wanted to use all the weapons in the federal regulatory arsenal to reduce carbon dioxide emissions, especially after the Supreme Court held in *West Virginia* that EPA lacked authority under the Clean Air Act to shift generation away from fossil fuels.[45] Using ELGs to increase the regulatory burden for coal plants was one such weapon.[46]

In sharp contrast to its approach in 2017, EPA chose not to suspend the 2020 Rule's obligations as it reconsidered them. EPA required utilities to continue pouring money into 2020-Rule systems, even though the new rulemaking would render those systems obsolete.[47] That created a profound dilemma for electric utilities—keep spending millions on soon-to-be-obsolete treatment systems to meet the 2020 Rule's December 31, 2025, deadline or prematurely retire a reliable facility.[48]

EPA issued the final Rule on May 9, 2024, and concluded the twice-rejected membrane systems are now BAT for FGDW and CRL. In addition, EPA concluded that previously rejected

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[43] *Id.* at 2-7 to 2-8.

[44] 86 Fed. Reg. 41,801 (Aug. 3, 2021).

[45] *See* supra n.11 (citation to FOIA documents).

[46] *See* Lisa Friedman, *E.P.A. Describes How It Will Regulate Power Plants After Supreme Court Setback*, N.Y. TIMES, July 7, 2022.

[47] 86 Fed. Reg. 41,801 (Aug. 3, 2021).

[48] *See* UWAG, Comments in Response to the U.S. EPA's Preliminary Effluent Guidelines Program Plan 15 (Oct. 14, 2021), EPA-HQ-OW-2021-0547-0465, https://www.regulations.gov/comment/EPA-HQ-OW-2021-0547-0465.

thermal evaporators and SDEs, "alone or in any combination" with membranes, are now available to eliminate the discharge of both FGDW and CRL.[49] EPA determined these "zero-discharge" technologies, deemed unavailable and too costly in 2015 and 2020, are now economically achievable even though major flaws in its cost model had been demonstrated, the costs of the technologies had not decreased, and the costs of the new rule would pile on top of costs utilities are incurring already just to comply with the still-applicable 2020 Rule.[50]

EPA also decided to impose limits on "unmanaged" CRL discharged through groundwater to waters of the United States (WOTUS) in a manner that is the "functional equivalent" of a direct discharge (FEDD). In *County of Maui v. Hawaii Wildlife Fund*, 590 U.S. 165 (2020), the Supreme Court held that such through-groundwater discharges will be identified case by case based on a range of factors. But neither EPA nor permit writers know today which power plants have such discharges, what will qualify as FEDD in a given circumstance, the unique engineering challenges the treatment of such discharges would entail, or the cost to overcome those challenges. EPA nonetheless imposed a one-size-fits-all limit on these through-groundwater discharges based on the fanciful concept of facilities completely intercepting and capturing any and all CRL leaks, treating them with chemical precipitation to meet the new limit, then discharging the CRL back underground, through groundwater, and into a WOTUS.[51]

For power plants that discharge to POTWs, the Rule concludes that certain pollutants "pass through" POTWs within the meaning of 33 U.S.C. § 1317(b), warranting the implementation of the pretreatment standards adopted in the Rule.[52] In making this pass-through

[49] 89 Fed. Reg. at 40,215, 40,225.
[50] 2024 TDD at 39, Tbl. 8.
[51] 89 Fed. Reg. at 40,247-48.
[52] *Id.* at 40,255.

determination, EPA neither referenced nor applied the definition of pass through included in the Agency's regulations at 40 C.F.R. § 403.3(p).

EPA established pretreatment standards for existing sources that are the same as the BAT limits for CRL, BATW, and FGDW applied to direct dischargers (with limited exceptions) and for the same reasons.[53] In setting pretreatment standards for existing sources equivalent to BAT for direct dischargers, EPA asserts that "[p]retreatment standards are designed to ensure that wastewaters from direct and indirect industrial dischargers are subject to similar levels of treatment."[54] The pretreatment standards for indirect discharges apply May 9, 2027.[55]

Direct-discharge facilities must meet the new limits as soon as possible (but no later than December 31, 2029), unless they retire or cease combusting coal by December 31, 2034. Plants must decide by the end of 2025 whether to try to meet the new zero-discharge limits or retire coal-fired generation.[56]

Significantly, EPA relied on the same flawed cost model it used for the 2020 Rule, even though commenters again explained how and why that model produced serious errors, including the same deficiencies that rendered the model wholly unreliable in 2020.[57] Commenters presented concrete proof in the form of real-world, real-time 2020-Rule compliance costs utilities presented to State regulators and that utilities continued to incur. At four exemplar plants alone, EPA significantly undershot costs:

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[53] *Id.* at 40,200, 40,255.

[54] *Id.* at 40,201.

[55] *Id.* at 40,200.

[56] *Id.* at 40,285. Units seeking to comply with the 2024 ELG Rule by committing to retire by 2034 must still satisfy the 2020 Rule's limits for FGDW and BATW no later than December 31, 2025, submit a notice by December 31, 2025, and cease coal combustion by December 31, 2034. *Id.* at 40,284–85.

[57] *See* EPRI Comments at 39-41 (May 26, 2023), EPA-HQ-OW-2009-0819-10047.

Comparison of EPA Projections v. Post-2020-Rule Utility Figures[58]

Plant Name	EPA Estimated Costs ($) for Biological Treatment + Chemical Precipitation		Actual Utility Anticipated Costs ($) for Biological Treatment Alone		EPA Estimated Costs as Percentage of Actual Utility Anticipated Costs
	Capital	O&M	Capital	O&M	Capital
Fort Martin (Units 1-2)	10,997,849	576,766	45,597,126	553,000	24.1%
Trimble County (Units 1-2)	12,785,392	1,535,726	64,800,000	3,085,416	19.7%
Mill Creek (Units 1-4)	5,560,844	442,871	68,000,000	3,069,562	8.2%
Ghent (Units 1-4)	9,068,391	741,951	70,200,000	4,215,581	12.9%
Mitchell (Units 1-2)	13,463,922	--	48,811,000	--	27.6%

But EPA did not correct the flaws in its model. While EPA acknowledged it likely underestimated compliance costs for some facilities, it speculated (with no supporting explanation or evidence) that it may have overestimated costs for others and asserted that, on balance, the cost-estimation methodology was "reasonable."[59] Nothing in the 2024 record indicates EPA modified its basic approach to estimating compliance costs based on the real-world examples of the costs companies actually incurred or reported to their regulators.[60] In

[58] UWAG Comments at 82-83 (May 30, 2023), EPA-HQ-OW-2009-0819-10161_Att. 1 (UWAG May 30, 2023 Comments).

[59] *See, e.g.*, EPA, Response to Public Comments for Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at 1188 (Apr. 2024), EPA-HQ-OW-2009-0819-10584 (2024 RTC).

[60] Table A-1, attached to the 2024 Regulatory Impact Analysis (RIA), summarizes "principal methodological changes EPA made to analyses of the costs and economic impacts of [the 2024] ELG rule as compared to the analyses of the 2020 rule and the 2023 proposal." EPA, EPA-821-R-24-007, Regulatory Impact Analysis for Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at Tbl. A-1 (Apr. 18, 2024), EPA-HQ-OW-2009-0819-10348 (2024 RIA). But the only reference to compliance costs is how those costs were discounted and annualized. EPA identifies no other significant adjustments to its overall cost methodology.

fact, EPA repeatedly refers to its previous cost analyses as if they are proven prototypes for analyzing costs and notes it continued to use the same basic approach.[61]

Although the Agency adjusted one variable relating to zero-discharge technologies,[62] that change did not cure the fundamental problems undermining EPA's 2020 cost estimates. For example, EPA's model predicts Alabama Power Company's Plant Miller would spend $25.2 million in capital costs to meet the new zero-discharge limits.[63] But a third-party engineering firm concluded those costs would be approximately $279 million—*an order of magnitude greater*.[64]

EPA compounded that error by feeding its erroneously modeled cost estimates into the Integrated Planning Model (IPM), on which EPA relies to assess the broader market effects of layering the 2024 ELG Rule's costs on top of the 2020 Rule's costs.[65] But, by feeding that model flawed inputs, EPA undermined IPM's output and any conclusions EPA draws from it.

IV. EPA Unlawfully Adopted Zero-Discharge Limits Based on Technologies that Are Not "Available"

A. EPA Used the Wrong Standard to Evaluate "Availability"

When interpreting a statute, courts start by giving the words their "ordinary meaning." *Sebelius v. Cloer*, 569 U.S. 369, 376 (2013). Here, the CWA requires "application of the best *available* technology economically achievable." 33 U.S.C. § 1311(b)(2)(A) (emphasis added). The plain meaning of "available" is "present or ready for immediate use," "accessible," or "obtainable." *Merriam-Webster's Collegiate Dictionary* 84 (11th ed. 2020) (*Merriam-Webster*);

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[61] *See, e.g.*, *id.* at 3-1, 3-3 (similar), 4-5 (similar).

[62] EPA specifically updated the cost methodology for brine encapsulation and solids handling. 89 Fed. Reg. at 40,220.

[63] EPA, Unit-level Costs and Loadings Estimates for the 2024 Final Rule, Tab 2, lines 11–14, EPA-HQ-OW-2009-0819-10336.

[64] Southern Company 2023 Comments at 37 and App. A.

[65] 89 Fed. Reg. at 40,265.

see also Webster's Seventh New Collegiate Dictionary 60 (1971) ("present in such chemical or physical form as to be usable," "accessible, obtainable"). As the Supreme Court has observed, "availab[ility]" is a "limitation" with "real content" and should be evaluated in light of "the facts on the ground." *Ross v. Blake*, 578 U.S. 632, 642-43 (2016) (interpreting "available" under 42 U.S.C. § 1997e(a)); *see also Safeco Ins. Co. of Am. v. Robey*, 399 F.2d 330, 338 (8th Cir. 1968) ("'available'" means "'actually available'" and not theoretically available).

EPA did not apply that standard. Rather than grapple with problems implementing the selected technologies at commercial scale across the country, EPA asked whether such implementation was theoretically *possible* at some point. 89 Fed. Reg. at 40,202 (interpreting availability by reference to "the pilot plant which acts as a beacon to show what is possible"); *id.* at 40,216 (describing the BAT standard as "technology-forcing"). The Agency reached this interpretation in reliance on "legislative history and legal precedents."[66] But courts "ordinarily resist[] reading words into a statute that do not appear on its face," *Bates v. United States*, 522 U.S. 23, 24 (1997), and resorting to legislative history is inappropriate where, as here, the plain meaning is "clear," *Ratzlaf v. United States*, 510 U.S. 135, 148 (1994).

Because EPA's availability standard deviates from the CWA's plain text, EPA's analysis was not in accordance with law. *FCC v. NextWave Pers. Commc'ns Inc.*, 537 U.S. 293, 300 (2003). That is reason alone for EPA to reconsider the Rule.

B. EPA Arbitrarily and Capriciously Concluded that Zero-Discharge Technologies Are Available Now

Even under EPA's unlawful "what-might-be-possible-in-the-future" standard, its conclusion that not one, but three different, zero-discharge technologies are "available," either alone or in combination, is arbitrary and capricious. EPA ignored important aspects of the

[66] *Id.* at 40,216.

problem, indulged in unstated and unsupportable assumptions, and disregarded the persistent, undisputable evidence that confounds its preferred conclusion. *See Motor Vehicle Mfrs. Ass'n of the U.S., Inc. v. State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29, 43 (1983). And EPA's about-face from its 2020 conclusion that zero-discharge technologies were *not* "available" under the Act only makes the holes in EPA's analysis more problematic. *See Dep't of Homeland Sec. v. Regents of the Univ. of Cal.*, 591 U.S. 1, 30 (2020); *FCC v. Fox Television Stations, Inc.,* 556 U.S. 502, 515 (2009).

Here, the facts on the ground demonstrate the zero-discharge technologies EPA deemed "available" in the Rule are nowhere near "present or ready for immediate use" at full scale. *Merriam-Webster* at 84. Membranes and evaporators are not available to actually (and, if so, reliably) achieve zero-discharge limits. Data gaps persist, and EPA has not grappled with the significant and likely insuperable problems of scaling up these systems and applying them to the challenging volume, flow rate, and chemistry of waste streams at large baseload plants. Indeed, some companies have already concluded "it is physically impossible to construct and have the suite of technologies operational" at their plants by 2029.[67] The challenges may be even more daunting for indirect dischargers required to implement the same zero-discharge technologies by May 9, *2027*.[68]

EPA assumed an alternative reality where steam electric plants across the country are essentially identical, and systems that may be available for a specific purpose at a plant in Arizona are similarly available to a plant in Georgia. EPA claims, for example, that "40 coal-fired power plants in the United States" achieve zero liquid discharge for FGDW.[69] EPA never

[67] Pet'rs' Stay Mot. Ex. 20, OVEC Decl. ¶ 26.
[68] *See* 89 Fed. Reg. at 40,200.
[69] *Id.* at 40,216.

identifies which specific plants it references, where they are located, or how each is achieving zero discharge. *See id.*

The numbers actually demonstrate the opposite of what EPA implies. The vast majority of plants that may be able to achieve zero discharge can do so not based on use of a technology on which EPA now relies, but rather based on other unique plant-specific factors that cannot be replicated across the industry as a whole.[70] EPA can identify only *five* domestic plants that actually implement the technologies on which it bases the Rule.[71] And EPA never explains how the real operational constraints that utilities consistently identified have now been overcome.[72]

1. Membrane systems

EPA recognized in 2020 that no membrane system had been installed at full operational scale at any U.S. plant to treat FGDW.[73] EPA acknowledges in the 2024 ELG Rule that this has not changed. 89 Fed. Reg. at 40,216 ("In the 2020 rule, the EPA rejected membrane filtration as a standalone BAT technology basis due in part to the *lack of a single full-scale domestic installation*, *which is still the case today*.") (emphasis added). Of the 40 plants EPA touts, *none* rely on the membrane technologies EPA now says are available. EPA nonetheless concluded that membranes are now available because they have been deployed at foreign plants and observed in pilot studies. But the record shows that EPA relied on no new information to reach these conclusions, and critical information gaps persist.

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[70] 2015 TDD at 7-19 (explaining how low-chloride coal allows FGDW to be recycled at some plants, and identifying nine plants where large evaporation ponds are used to achieve zero liquid discharge).

[71] 2024 TDD at 27–28.

[72] In the case of CRL, EPA provided even less technical support for setting a zero-discharge limit based on available control technologies. *See* 88 Fed. Reg. 18,824, 18,848, 18,838-39 (Mar. 29, 2023), EPA-HQ-OW-2009-0819-9025 (proposing chemical precipitation as the technology basis for establishing CRL limits and only soliciting comments on the *possibility* of setting a CRL zero-discharge limit).

[73] 85 Fed. Reg. at 64,663.

In 2020, EPA correctly identified significant gaps in data about the foreign plants where membranes have been deployed. Although EPA was aware of facilities using membranes in China, South Korea, and Finland, the Agency lacked information sufficient to show "how these systems are configured or operated," "what levels of reductions they achieve," "whether there are any particular performance difficulties that result from continuous operation," or "importantly, how applicable these operations would be to plants across the United States."[74]

No new information emerged to answer these questions. EPA relied primarily on a generic two-page account of its 2021 phone calls with DuPont.[75] Unsupported vendor representations are seldom adequate,[76] especially where, as here, the information provided is incomplete. EPA claimed DuPont provided "detailed information" on two China installations,[77] but that "detailed information" amounts to one paragraph for each facility, and it includes no performance data and no operations and maintenance information. Indeed, the descriptions omit key basic facts, such as the size of the units being serviced, volume of wastewater treated, or even the type of coal these plants are burning.[78] These are critical unanswered questions that, as EPA correctly recognized in 2020, go to the heart of any rational assessment of whether the technology can be deployed at full scale at U.S. plants.[79] EPA never disputed in the 2024 ELG Rule that these gaps persist, it just ignored them to conclude implausibly that these foreign

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[74] EPA, Response to Public Comments for Revisions to the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at 2-108 (Aug. 2020), EPA-HQ-OW-2009-0819-9015.

[75] Memorandum from U.S. EPA to Steam Electric Record – EPA-HQ-OW-2009-0819, Notes from Vendor Call with DuPont October 29 and December 8, 2021 at 1–3 (Nov. 14, 2022), EPA-HQ-OW-2009-0819-9378 (Notes from Vendor Call).

[76] *See Sierra Club v. Costle*, 657 F.2d 298, 364 (D.C. Cir. 1981) (noting that, although vendor statements might be "informative," their ability to support a regulatory requirement "taken alone, would not be decisive").

[77] Memorandum from U.S. EPA to Steam Electric Rulemaking Record – EPA-HQ-OW-2009-0819, Technologies for the Treatment of Flue Gas Desulfurization Wastewater, Coal Combustion Residual Leachate, and Pond Dewatering – DCN SE10281 at S-1 (Feb. 15, 2023), EPA-HQ-OW-2009-0819-9656 (Feb. 2023 Treatment Technologies Memo).

[78] Notes from Vendor Call at 1-3.

[79] UWAG May 30, 2023 Comments at 50-51 and 59-63.

plants' continued operation provides "significant new information" that membranes can achieve zero discharge.[80]

EPA's reliance on pilot studies is similarly misplaced. None of the small-scale pilot studies EPA cited demonstrates whether membranes can be reliably operated at full operational scale.[81] Pilot studies are like science experiments—they test specific hypotheses and produce data that can be used to revise those hypotheses.[82] EPA references three new pilot studies in the 2024 ELG Rule, but it never discussed the data they produced or how the configurations of those pilots drive any conclusions the Agency might reasonably draw from them. For example, the one study EPA specifically references operated only at 264 to 793 gallons per day (gpd), far from the 7,000 to 1,810,080 gpd needed at big power plants. And it showed that plants would need to install costly additional treatment on top of the cost of membranes to be effective.[83]

EPA did not adequately address these issues in the 2024 record, either in the preamble or its response to comments. Tellingly, the Agency first claimed that the Rule relies on three technologies.[84] But EPA then concluded that membranes *alone* can be used to achieve zero discharge, and other technologies are immaterial to *that* claim. EPA also asserted that other technologies it has evaluated have been scaled up successfully but never assessed whether those technologies share membranes' operational constraints.[85] And, from all that, EPA somehow jumped to the conclusion that these new pilot studies provide "significant evidence" that membranes can work at full-scale applications—without addressing the confounding evidence.[86]

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[80] 89 Fed. Reg. at 40,217.
[81] *See* UWAG May 30, 2023 Comments at 54-55 and 63-65.
[82] *Id.* at 63.
[83] *Id.* at 64.
[84] *See, e.g.*, 89 Fed. Reg. at 40,217.
[85] *Id.*
[86] *Id.*

In short, EPA ignored major data gaps and technical evidence that confounds its conclusion that membranes are BAT for FGDW, which makes its conclusion arbitrary and capricious. *See Ohio v. EPA*, 603 U.S. 279, 294-96 (2024).

2. Thermal evaporation systems

Thermal evaporation technologies are not available nationwide to satisfy zero-discharge limits alone. EPA said as much in 2015,[87] and nothing has changed.

Indeed, experience with thermal evaporation systems, before and after 2015, has revealed many difficulties and operational uncertainties. Much of the uncertainty is due to the high variability in FGDW constituents.[88] Because FGDW is so corrosive, engineers must either choose exotic (and expensive) metal components for thermal evaporators or plan for continual replacement of parts and the associated downtime.[89] Corrosion will eventually occur even where the best metals are used.[90]

EPA notes that two facilities—Iatan and Petersburg—have deployed thermal evaporation systems, but both have experienced significant problems.[91] Iatan attempted to use thermal evaporation but had to abandon the system in 2017 due to operational challenges typical for these types of systems.[92] The Petersburg plant experienced similar obstacles. It installed its system in 2018, but the operator reports that "[t]he thermal system can only handle a portion of

[87] 80 Fed. Reg. at 67,852.

[88] H.A. Nebrig et al., "Preliminary Assessment of a Thermal Zero Liquid Discharge Strategy for Coal-Fired Power Plants," presented at the International Water Conference, November 13–17, 2011 at 10, EPA-HQ-OW-2009-0819-8721_Att. 52.

[89] EPA, Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category: EPA's Response to Public Comments, Part 6 of 10 at 6-41 (Sept. 2015), EPA-HQ-OW-2009-0819-6469_Att. 5 (2015 RTC Part 6 of 10).

[90] UWAG Comments at 185 (Sept. 20, 2013), EPA-HQ-OW-2009-0819-4655_Att. 1.

[91] *See* Feb. 2023 Treatment Technologies Memo at A-3 to A-4, P-2.

[92] EPRI Comments at 29 (Jan. 20, 2020), EPA-HQ-OW-2009-0819-8293.

the [FGDW] at the station."[93] Many assumptions about how the system would perform at various flow levels have proven faulty. For example, experience has shown that pretreatment systems must be "two or three times" larger than originally assumed.[94]

Lacking demonstrated effectiveness of thermal evaporation systems at operational scale, EPA turned to a familiar crutch—foreign installations. But, as with membranes, EPA was indifferent to the foreign plants' specific operational features or whether their unique characteristics can be replicated domestically. For example, EPA referenced Italian plants that use different coal that may not be representative of coal used at U.S. plants and ignored the fact that the facilities where thermal evaporators have been installed frequently bypass those systems due to their exorbitant operational costs.[95] Additionally, information about the actual operational characteristics of Chinese plants using thermal evaporation remains unavailable.[96]

It is not enough to merely list examples without explaining why those examples provide relevant, useful information. The Agency never meaningfully engaged with the real operational constraints on the systems identified in the record, which makes its conclusions arbitrary and capricious. *Ohio*, 603 U.S. at 294–96.

3. Spray dry evaporators (SDEs)

EPA's consideration of SDEs was even more sparse. Until now, EPA has never considered SDE technology as more than a supplement to other systems, and it only can be used at plants with certain configurations.[97] SDEs also present many of the same problems that

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[93] Memorandum from Danielle Stewart, ERG et al. to Steam Electric Rulemaking Record, Notes from Call with Indianapolis Power & Light – Petersburg Generating Station at 3–4 (Aug. 14, 2020), EPA-HQ-OW-2009-0819-8891.

[94] *Id.* at 4.

[95] EPRI Comments at 5-17 (Sept. 20, 3013), EPA-HQ-OW-2009-0819-4499_Att. 1; 2015 RTC, Part 6 of 10 at 6-41.

[96] Notes from Vendor Call at 2.

[97] Feb. 2023 Treatment Technologies Memo at P-1 to P-2 (noting that SDEs are available only for plants with a single power block and a small wastewater flow rate).

plague thermal evaporation systems—most notably, operators must specially handle the challenging solids SDEs produce.[98]

In both the 2015 and 2020 Rules, EPA did not even consider SDEs as a standalone technology system among the many treatment systems it evaluated.[99] In the 2024 ELG Rule, EPA again noted that such systems can be used at some plants to supplement other systems.[100] And the Agency candidly acknowledged that "[SDEs] may not be the best choice for all plants."[101] But EPA then pushed its own concessions aside and concluded that, because SDEs have been installed at three domestic plants, they must be available at every plant and standing alone can achieve zero liquid discharge.[102]

Once again, EPA failed to engage the logistical constraints that preclude the use of SDEs broadly across the utility sector. Remember, the Agency concluded that this technology, *standing alone*, is sufficiently available to achieve zero liquid discharge of FGDW. The unexplained leaps in reasoning, and the failure to address significant evidence showing why SDEs cannot be deployed broadly, render the Agency's conclusion arbitrary and capricious. *See Ohio*, 603 U.S. at 294-96.

4. Because it defectively evaluated these technologies individually, EPA also arbitrarily and capriciously concluded that they can work in combination

Perhaps recognizing that none of the three technologies is "available" standing alone, EPA announced these technologies could be used in combination to achieve zero discharge.[103] But serial flaws in the Agency's consideration of the individual technologies defeat this

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[98] UWAG May 30, 2023 Comments at 92.
[99] *Supra* at 9-12 (discussion of 2015 and 2020 Rules).
[100] *See* 2024 TDD at 27-28.
[101] 2024 RTC at 1208-09.
[102] *Id.*
[103] 89 Fed. Reg. at 40,215.

cumulative effort, too. And ultimately, the Agency never conducted the type of analysis needed to support that conclusion. The chief reason why EPA's analysis is flawed for each technology is the Agency's blindness to the real site-specific and plant-specific reasons why these technologies are available only (if at all) in a narrow set of circumstances. Because EPA declined to engage with each technology's limitations, it cannot know whether the technologies can work effectively together to fill each other's availability gaps.[104]

V. EPA Arbitrarily and Capriciously Concluded that Zero-Discharge Technologies Are "Economically Achievable"

If EPA wanted to push to the limit of "available" treatment technologies, it was imperative that it scrupulously analyze whether implementing those technologies is economically achievable. After all, higher-than-expected implementation costs are strong evidence that the technology may not truly be available. But EPA was far from scrupulous in how it evaluated cost. Notwithstanding substantial real-world data revealing significant flaws in EPA's model for estimating compliance costs, EPA persisted in using that model with no meaningful correction. Because it failed to forthrightly address or otherwise explain contrary data, EPA's "economic achievability" finding was arbitrary and capricious. *Ohio*, 603 U.S. at 294-96.

Accurately assessing the cost of installing and operating treatment technology is at the heart of EPA's statutory duty under the CWA. The statute directs EPA to select only those technologies that are "economically achievable" and specifically instructs EPA to consider "the cost of achieving such effluent reduction." 33 U.S.C. §§ 1311(b), 1314(b)(2)(B). Fair

[104] The same flaws and shortcomings in EPA's analysis discussed above for FGDW also apply to the establishment of zero-discharge limits for CRL. For example, the technologies on which EPA relies to impose zero-discharge limits for CRL are the same technologies used for FGDW. For these reasons, it was arbitrary and capricious for EPA to set zero-discharge limits for both CRL and FGDW.

evaluation of the cost of regulation is essential to reasoned decision-making. *Michigan v. EPA*, 576 U.S. 743, 753, 759 (2015).

With the 2024 Rule, EPA had a perfect opportunity to fairly assess how its 2020 cost projections matched the costs industry was actually incurring. EPA asked larger utilities to provide that information,[105] and most did.[106] And as noted above (at 16, table of cost comparisons), the data showed EPA's projections did not match reality. The 2020 Rule not only underestimated costs, but did so systematically, sometimes by an order of magnitude. And this cost data didn't come from just abstract table-top projections—they were based on contractor bids informed by months of on-the-ground engineering and design work at individual plants.

At Plant Bowen, for example, the ongoing construction effort has already cost the utility $50 million and is expected to cost $110 million once complete, even though EPA estimated only $28.6 million in capital costs to install a biological treatment system to comply with the 2020 Rule.[107] Plant Mitchell's costs are also illustrative. It provided EPA with estimates resulting from detailed plant- and unit-level evaluation, which state regulators scrutinized during rate-recovery proceedings. Its fine-tuned estimate ($48 million) is more than three-and-a-half times EPA's ($13 million).[108] This information—all in EPA's administrative record—reflects real-world numbers and estimates informed by months of work by utilities to design cost-efficient, functioning systems at actual sites.[109]

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[105] *See, e.g.*, Letter from Robert K. Wood, Director, Engineering & Analysis Division, EPA, to Donna B. Hill, Principal Scientist, Land & Water, Southern Company at 1-2 and Enclosures 1-6 (Dec. 13, 2021), EPA-HQ-OW-2009-0819-9027.

[106] *See, e.g.,* Pet'rs' Stay Mot., Ex.18, Letter from Donna Hill, Southern Company, to Robert K. Wood, Director, Office of Water, Engineering & Analysis Division, EPA (Apr. 1, 2022).

[107] Resp't-Intervenors' Resp. to Utility & State Pet'rs' Mot. for a Stay Pending Review, Ex.6, Decl. of Kevin Draganchuk, Att. A at 3–4, *Sw. Elec. Power Co. v. EPA*, No. 24-2123(L) (8th Cir. Aug. 20, 2024), ECF No. 5426423.

[108] Sherrick Direct Testimony at 3-4 and Company Exhibit BDS-D3.

[109] *See*, *e.g.*, Southern Company 2023 Comments at 25-27.

After reviewing these submissions, EPA was obliged to engage the confounding data meaningfully, *see, e.g., Wild Virginia v. U.S. Forest Serv.*, 24 F.4th 915, 927-28 (4th Cir. 2022) (finding agency action arbitrary and capricious when real-world data differed materially from results predicted by agency's model); *accord Zen Magnets, LLC v. Consumer Prod. Safety Comm'n*, 841 F.3d 1141, 1149 (10th Cir. 2016); *Catawba Cnty. v. EPA*, 571 F.3d 20, 45 (D.C. Cir. 2009) (per curiam), but it never did.

EPA instead contended that utilities had provided their data in the wrong format or with insufficient specificity.[110] Leaving aside that EPA did not request the data in any particular format, it easily could have served utilities follow-up requests for data to be delivered in precisely the format EPA desired. That never happened. The Agency instead used this illusory "formatting" grievance to avoid meaningfully engaging with contrary data.

Nor does it matter that the utilities presented unit-level costs rather than industry-wide figures.[111] Economic achievability is determined by adding up plant-specific cost estimates to obtain industry-wide estimates. If EPA's unit-level estimates consistently and dramatically underestimate costs, then EPA's industry-wide estimate necessarily compounds that error. Shifting focus to the broader industry does not solve EPA's failure to grapple on the record with evidence confounding its conclusions. And properly assessing industry-wide costs was EPA's burden to bear, especially because only EPA can collect information for the entire industry.

Ultimately, EPA acknowledged "it may have underestimated compliance costs for some plants."[112] But acknowledging a problem is not the same as engaging with it. *Ohio*, 603 U.S. at 295 ("[A]wareness is not itself an explanation."). And *no* evidence shows EPA conducted *any*

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[110] 2024 RTC at 1188, 1195.
[111] *Id.*
[112] *Id.* at 1188.

analysis to better understand the margin of error in its previous analysis, why its estimates were so wide of the mark, or why it remained appropriate to rely on a cost-estimation methodology that was so obviously flawed. So it is no surprise that, in concluding that its "cost estimates provide a reasonable estimate for purposes of determining economic achievability," EPA could only speculate that it might have made offsetting errors—that is, that "it may have … overestimated costs for other plants."[113] That is classic "sidestep[ping]," and it falls well short of an agency's obligation when confronted with data confounding its analysis. *Ohio*, 603 U.S. at 295.

Although these examples of EPA's failure to correct its flawed cost-estimating methodology involve FGDW systems, the error affects all waste streams, including CRL. The technologies on which EPA relies to impose zero-liquid-discharge limits on CRL are the same used to impose similar limits on FGDW. And its method of estimating the cost of implementing those technologies is no different.[114] For these reasons, it was also arbitrary and capricious for EPA to set zero-liquid-discharge limits for CRL generated at affected facilities.

VI. EPA Arbitrarily and Capriciously Ignored the Substantial Costs Industry Incurred in Reliance on the 2020 Rule

The 2024 ELG Rule is a textbook example of why agencies must provide a detailed justification for reversing course on a policy that induces substantial costs in reliance. EPA acknowledged in 2024 that it was reversing decisions made in 2020, so it was obligated to understand any reliance interests from the earlier decisions.[115] *Fox Television*, 556 U.S. at 515. The first step toward meeting that obligation was to understand the costs incurred to comply with

[113] 2024 RTC at 1188.
[114] 2024 TDD at 58.
[115] 89 Fed. Reg. at 40,219.

the 2020 Rule and how those costs might affect the economic achievability of zero-discharge technology. EPA did not meet that obligation.

Although EPA collected data on what utilities spent to comply with the 2020 Rule, EPA then disregarded that data in evaluating how the utility sector would be affected by stacking the cost of zero-discharge technology on top of 2020-Rule costs. Instead, EPA plugged the rosy (and inaccurate) estimates from 2020 into IPM, which then predicted the costs of compliance for regulated utilities wouldn't be so bad.[116] At best, that produced the hypothetical costs industry *might* have incurred had EPA's cost-estimation model been accurate. But EPA was required to understand and account for the actual costs utilities incurred to comply with the 2020 Rule, *Ohio*, 603 U.S. at 294-96, and explain in detail why they are justified, *Fox Television*, 556 U.S. at 515. EPA failed to do so, making its action arbitrary and capricious.

VII. EPA Failed to Follow Statutory Procedures in Setting Novel ELG Limits on "Functionally Equivalent" Discharges of CRL Through Groundwater

Every facility regulated by the Rule generates wastewater streams controlled, treated, and then discharged through an outfall (e.g., a pipe) directly into WOTUS. These "point source" discharges are subject to limits—which must conform to ELG rules—in a facility's national pollutant discharge elimination system (NPDES) permit. *See* 33 U.S.C. §§ 1342(a) (NPDES permit requirements), 1362(14) (point source definition). Some of these facilities *might* also inadvertently leak pollutants into the ground that enter groundwater and indirectly flow to a WOTUS. If that happens in a manner "functional[ly] equivalent" to a direct discharge into WOTUS (a "FEDD"), the discharge is prohibited unless authorized by an NPDES permit. *Maui*, 590 U.S. at 170.[117]

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[116] *Id.*

[117] A FEDD determination is made via case-by-case analysis of seven non-exclusive factors identified in *Maui*. 590 U.S. at 184-85.

The Rule established ELG limits on releases of CRL that are a FEDD under *Maui*. 40 C.F.R. §§ 423.11(ff)(1), 423.13(l)(2)(ii). But here, too, EPA cut corners to achieve broader objectives and did not comply with basic ELG-setting requirements. EPA did not (and could not) define the universe of covered facilities (is it 1 or 100?), explain how the technology on which those limits are based will apply to myriad possible circumstances involving CRL FEDDs, or credibly determine the economic achievability of controlling and treating CRL FEDDs to meet the new limits. Of course, EPA could do none of those things without knowing the universe of covered FEDDs and their circumstances.

EPA could have addressed the problem by allowing state permit writers to set discharge limits on CRL FEDDs based on site-specific facts and their best professional judgment—an approach EPA often follows where there is an insufficient basis to set a single national ELG limit.[118] But EPA instead set a single, one-size-fits-all limit that applies to *both* direct surface discharges of CRL under 40 C.F.R. § 423.11(ff)(2) *and* indirect CRL releases that flow through groundwater before entering WOTUS in a manner that is a FEDD under 40 C.F.R. § 423.11(ff)(1).[119] Technology-based ELG limits are routinely applied to pollutant discharges at the surface, but application to releases of pollutants that disperse through groundwater before entering WOTUS will be novel, complex, and highly fact-specific. The ELG limit EPA set for

[118] *See* 89 Fed. Reg. at 40,203.

[119] The final rule sets a single ELG limit for arsenic and mercury in "unmanaged combustion residual leachate," 40 C.F.R. § 423.13(l)(2)(ii), 89 Fed. Reg. at 40,298. The rule defines "unmanaged combustion residual leachate" to include two different types of discharges: (1) a discharge where it is "determined by the permitting authority to be the functional equivalent of a direct discharge to waters of the United States (WOTUS) through groundwater," and (2) a discharge that "[h]as leached from a waste management unit into the subsurface and mixed with groundwater prior to being captured and pumped to the surface for discharge directly to WOTUS." 40 C.F.R. § 423.11(ff). This petition highlights the deficiencies in the FEDD portion of the unmanaged leachate subcategory but does not identify errors in EPA's approach to the second type of discharge at § 423.11(ff)(2). Regardless, as explained below, UWAG recommends that EPA repeal the unmanaged CRL subcategory and allow permit writers to determine appropriate limits based on their best professional judgment.

CRL discharges through groundwater is ungrounded, unworkable, and effectively a complete prohibition on "functionally equivalent" discharges of CRL.

To set an ELG limit, EPA must analyze the availability (including engineering feasibility) and economic achievability of technology to treat an identified category of industrial discharge. 33 U.S.C. §§ 1311(b)(2)(A), 1314(b)(2). The analysis is not abstract. Rather, Congress required EPA to consider age of equipment and facilities involved, the process employed, the engineering aspects of the application of various control techniques, process changes, the cost of achieving effluent reduction, and non-water quality environmental impacts (including energy requirements). 33 U.S.C. § 1314(b)(2)(B). Given these factors, EPA must both define *and* identify the discharge category to realistically analyze available technology and economic achievability.

Unmanaged CRL that leaves a regulated facility, travels through groundwater, and then enters WOTUS in a manner *functionally equivalent* to a direct discharge into WOTUS is a unique (and so far unidentified) waste stream. Naturally, once CRL enters groundwater it can dissipate, intermingle with other natural constituents, and potentially alter over time and distance.

So it's unclear which facilities would be subject to the limits for unmanaged CRL FEDDs and what those discharges would look like. EPA did not say in the record for the 2024 ELG Rule, nor could it, given the Supreme Court's recognition in *Maui* that FEDD determinations must be site-specific evaluations because "there are too many potentially relevant factors applicable to factually different cases." *Maui*, 590 U.S. at 184. Instead, EPA's proposal estimated costs and pollutant loadings for CRL FEDDs by assuming *all* impoundments or landfills that lack a composite liner or where the liner status was unknown would result in a

FEDD.[120] This ungrounded assumption rests on multiple unestablished notions—that (1) all these impoundments or landfills leak CRL; (2) all these CRL leaks reach groundwater; (3) all the CRL leaks that enter groundwater will reach a WOTUS; and (4) all the CRL leaks that reach a WOTUS will be functionally equivalent to a direct discharge.[121] But EPA has not established the prerequisites for a FEDD determination for *any* covered facility, much less the universe of unlined impoundments and landfills.

Even if one or more covered facilities leak CRL that flows through groundwater to WOTUS (which is not documented), there may be significant time or distance involved, intermingling with other natural or anthropogenic chemicals; chemical changes; and other circumstances that preclude a FEDD determination under case-by-case *Maui* factors. Characteristics considered under *Maui* but not considered by EPA in the rule include:

- Distance traveled: Is it 15 feet or 15 miles? The answer can determine where the waste stream is captured and treated, which can make a major difference in engineering and costs.
- Time to reach WOTUS: Is it 10 days or 10 years? The answer can determine the ability to even make a FEDD finding, as well as determine how to address such a discharge (if it is a FEDD).

[120] *See* Memorandum from U.S. EPA to Steam Electric Rulemaking Record – EPA-HQ-OW-2009-0819, Evaluation of Unmanaged CRL – DCN SE11501 at 9 (Apr. 18, 2024), EPA-HQ-OW-2009-0819-10257 (identifying 103 landfills that are not composite lined and 219 surface impoundments that are not clean closed or composite lined) ("EPA Unmanaged CRL Memo").

[121] EPA attempted to correct its evaluation of costs and loadings at the final rule stage by performing an analysis of lower and upper bounds, but that analysis rested on even more assumptions. *Id.* at 13 (assuming, for example, three scenarios for an "upper bound" analysis and two scenarios for a "lower bound" analysis). None of EPA's analysis at the final rule stage was subject to public comment.

Similar uncertainties apply to all the *Maui* factors, including (critically) flow rate, constituents in groundwater, and material travelled through.[122] So how does one tailor an ELG to the unique characteristics of CRL FEDDs and on that basis determine available and economically achievable treatment? EPA side-stepped the difficulty of applying these factors and declined to acknowledge their relevance. Instead, it assumed unmanaged CRL FEDDs have the same pollutant characteristics as managed CRL.[123] But this ignores the effects of mixing CRL with groundwater, which normally causes pollutants to become more diffuse and can complicate treatment (e.g., by increasing the volume of wastewater that must be treated and by complicating capture and control of the wastewater). Furthermore, mixing with groundwater and contacting underground formations can change pollutant makeup (e.g., by adding constituents or changing their form or concentration). EPA has previously recognized the importance of accurately characterizing a waste stream when selecting treatment technologies.[124] But here, it did not use actual concentration data to develop average pollutant concentrations for CRL FEDDs (a standard practice for any other type of discharge).

EPA also failed to adequately assess the technology and costs to treat unmanaged CRL FEDDs because its wide range of assumptions rendered its estimates wholly inadequate. EPA could not say, for example, the time needed to treat pumped groundwater to achieve ELG limits, the volume of groundwater to be pumped, the amount of piping needed to reach treatment equipment, whether a new outfall must be created and permitted, whether demolition of existing

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[122] Indeed, the seven enumerated *Maui* factors are "just some of the factors that may prove relevant (depending on the circumstances of a particular case)." *Maui*, 590 U.S. at 184.

[123] For example, instead of developing data specific to unmanaged CRL FEDDs, EPA simply applied "the untreated and chemical-precipitation treated [CRL] average pollutant concentrations" it developed for the 2015 Rule. EPA Unmanaged CRL Memo at 17-18.

[124] For the 2015 Rule, EPA collected and analyzed wastewater samples from 13 power plants and directed four additional plants to collect and submit samples. 78 Fed. Reg. 34,432, 34,444 (June 7, 2013), EPA-HQ-OW-2009-0819-0068. EPA then analyzed the sampling data, calculated average pollutant concentrations, and identified "pollutants of concern" for each type of wastewater. 2015 TDD at 6-18 to 6-28.

equipment and facilities will be necessary to accommodate new equipment, or what measures are needed to address baseline pollutants in the groundwater (e.g., those contributed by other industrial sites or even naturally occurring).

Ultimately, a determination that a FEDD is occurring will require a fact-intensive, site-specific inquiry that can be made only on a case-by-case basis. That inquiry will naturally inform treatment options, such as where and how the CRL can be captured, controlled, treated, and discharged. But instead of allowing permit writers to make those determinations for each facility, including the ability to set CRL limits based on the particular facts and their best professional judgment (BPJ), EPA set one ELG limit for all permit writers to impose on facilities—and did so without identifying or analyzing the actual facilities that will be regulated, much less whether and how those ELG limits could be met under the circumstances of those FEDD discharges.[125]

Due to the "unmanaged" and diffuse nature of the subcategory, few if any facilities are likely to be able to capture and treat all unmanaged CRL FEDDs to the new limits; even if they do, it is unlikely the newly controlled and treated waste stream would be redirected to groundwater rather than discharged through the facility's permitted outfall. The result will likely be no "functionally equivalent" discharge through groundwater once the CRL is captured and

[125] The problem with forcing a single ELG limit across an unknown universe of parameters is one of EPA's own making. Instead of resting a single limit on a chain of flawed assumptions, EPA could have required permit writers to perform BPJ analyses for any identified FEDDs. BPJ ELGs are standard practice where the Agency has not set a national ELG. *See* EPA, EPA-833-K-10-001, U.S. EPA NPDES Permit Writer's Manual at 5-45 (Sept. 2010), https://www.epa.gov/sites/default/files/2015-09/documents/pwm_2010.pdf. EPA may argue that key facts will be addressed in individual permit proceedings, but that underscores that effluent limits should be set in those proceedings (based on BPJ), not through a single limit that fails to account for site-specific characteristics. The same complaint does not apply to the limit for unmanaged CRL pumped to the surface prior to a direct discharge to WOTUS under 40 C.F.R. § 423.11(ff)(2), which does not involve a hypothetical class of discharges yet to be identified or such varied circumstances.

treated. So the ELG limit is likely to function as an unwritten FEDD prohibition rather than an actual permit limit as intended by the CWA and the Supreme Court in *County of Maui*.

EPA's limits on unmanaged CRL FEDDs is arbitrary and capricious because it failed to account for or tailor the limits to the unique nature of such discharges.

VIII. EPA's "Pass Through" Analysis for Indirect Discharges Was Arbitrary and Capricious and Failed to Comply with the CWA

EPA purported to justify the pretreatment standards adopted in the Rule upon a finding that, absent the adopted standards, certain pollutants would "pass through" POTWs.[126]

In describing the criteria for its pass-through findings, EPA stated that "[a] pollutant is determined to pass through POTWs when the median percentage removed nationwide by well-operated POTWs is less than the median percentage removed by the BAT/NSPS technology basis."[127] For the pretreatment standards based on zero-discharge technologies (applicable to CRL, BATW, and FGDW from certain facilities), however, EPA noted that it "did not conduct its traditional pass-through analysis for wastestreams with zero-discharge limitations or standards."[128] Instead, EPA simply assumed that "*all* pollutants in those wastestreams treated by the zero-discharge technologies would otherwise pass through the POTW absent application of the zero discharge technologies that form the BAT bases for [FGDW, BATW, and CRL]."[129]

A. EPA Failed to Follow its Own Regulations

EPA's pass-through findings for the pretreatment standards adopted in the Rule are arbitrary and capricious because they ignore, and fail to conform to, the definition of "pass through" included in EPA's regulations at 40 C.F.R. § 403.3(p):

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[126] *See* 89 Fed. Reg. at 40,255.
[127] *Id.*
[128] *Id.*
[129] *Id.* (emphasis added).

> [A] [d]ischarge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

The pretreatment standards in the Rule are premised on pass-through analyses that completely ignored this regulation, which defines pass-through with reference to whether discharges from a POTW cause a violation of any requirement of the POTW's NPDES permit. EPA did not point to any such violations in making its pass-through findings. In failing to apply the definition of pass through in its own regulations, EPA acted arbitrarily and capriciously. *See, e.g.*, *Nat'l Env't Dev. Assoc.'s Clean Air Project v. EPA*, 752 F.3d 999, 1009 (D.C. Cir. 2014).

B. Alternatively, EPA's Assumption that All Pollutants Pass Through POTWs Absent Zero-Discharge Pretreatment Standards Is Inconsistent with CWA Requirements

Even if EPA's evaluation of pass through in a manner inconsistent with its regulations was not fatal to the Rule's adoption of pretreatment standards, EPA's pass-through finding in support of adoption of zero discharge technologies failed to comply with the statutory text, which requires the Agency to establish pretreatment standards for pollutants "which are *determined* not to be susceptible to treatment by such treatment works or which would interfere with the operation of such treatment works." 33 U.S.C. § 1317(b) (emphasis added). In the 2024 ELG Rule, EPA did not make a determination that pollutants subject to zero-discharge technologies would otherwise pass through POTWs, it simply *assumed* this to be the case.

EPA acknowledged that it "did not conduct its traditional pass-through analysis for wastestreams with zero-discharge limitations or standards."[130] In lieu of this traditional analysis, EPA concluded that "all pollutants in those wastestreams . . . would otherwise pass through the

[130] 89 Fed. Reg. at 40,255.

POTW absent application of the zero discharge technologies." *Id.* EPA cited no quantitative support concerning the removal efficiency of POTWs in making this sweeping assertion.[131] EPA's Technical Development Document acknowledged the varying degrees of removal efficiencies inherent to zero-discharge systems.[132]

Assuming that all pollutants will otherwise pass through POTWs without application of zero-discharge technologies avoids rather than applies the statutory requirement to make a "determination" that pollutants will pass through POTWs as a prerequisite for adopting pretreatment standards under section 307(b) of the CWA, 33 U.S.C. § 1317(b). EPA did not follow the statutory text and exceeded its authority. *Iowa League of Cities v. EPA,* 711 F.3d 844, 877-78 (8th Cir. 2013).

REQUEST FOR IMMEDIATE AGENCY ACTION TO SUSPEND OR DELAY COMPLIANCE DEADLINES

To account for serious concerns raised above about the availability and cost of new technology required by the 2024 ELG Rule, including the imminent planning and capital expenditures facilities will incur as soon as summer 2025 to meet the compliance deadlines and limitations in the 2024 ELG Rule, UWAG hereby requests the following:

- **Initiate Review of the 2024 ELG Rule.** Because the Rule hinders the generation of reliable and affordable electricity, EPA should include the 2024 ELG Rule on its list of regulations to review and potentially "suspend, revise, or rescind," consistent with the Unleashing American Energy EO.

[131] The closest EPA came to addressing POTW removal efficiency was to assert vaguely that "typical" POTWs do not treat waste streams for "salts." 89 Fed. Reg. at 40,255.

[132] 2024 TDD, Section 4.1.2 Membrane Filtration at 25-27.

- **Postpone Compliance Deadlines.** EPA should promptly take action to postpone the Compliance Dates in the 2024 ELG Rule[133] including by, but not limited to:
    - *Issuing an Administrative Stay.* When judicial review is pending and when "justice so requires," 5 U.S.C. § 705 confers discretion upon an agency to "postpone the effective date of action taken by it."[134] For all the reasons above, justice dictates a stay of the compliance deadlines to preserve the regulatory status quo while the litigation is pending and as EPA considers whether and how to revise the ELG requirements.
    - *Commencing Rulemaking.* EPA should initiate notice-and-comment rulemaking to permanently postpone the Compliance Dates in the 2024 ELG Rule.[135] Postponing the Compliance Dates may be needed because an administrative stay would only last until judicial review concludes. A rule postponing Compliance Dates would provide relief to regulated entities while EPA considers issuing a substantive rule to revise or repeal the 2024 ELG Rule.
    - *Initiating Other Administrative Actions.* EPA should take all other administrative actions that may be necessary to assure the immediate suspension or delay of the Rule's compliance deadlines while EPA works to reconsider and revise, as appropriate, the substantive requirements of the 2024 ELG Rule pursuant to notice-and-comment rulemaking. Notably, there are many options available for

[133] Suspending the deadlines for indirect dischargers, among others, is particularly critical because they face a hard deadline of May 9, 2027, to meet the pretreatment standards for existing sources (PSES)/pretreatment standards for new sources standards (PSNS) for several wastestreams. Accordingly, those dischargers are in the process now of making costly decisions that may be greatly affected by reconsideration.

[134] In 2017, EPA postponed the compliance dates in the 2015 Rule, concluding that the 2015 compliance dates constitute "effective dates" for purposes of APA section 705.

[135] *See, e.g.*, EPA, Postponement of Certain Compliance Dates for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 82 Fed. Reg. 43,494 (Sept. 18, 2017), EPA-HQ-OW-2009-0819-7080 (postponing the compliance deadlines in the 2015 ELG Rule).

EPA to suspend or extend the compliance deadlines in order to preserve the status quo and avoid irreparable harm pending the completion of the reconsideration proceeding. These options for EPA action include the following: (1) prompt issuance of an interim final rule without notice-and-comment under the "good cause" exemption set forth in the APA at 5 U.S.C. § 553(b), (B),[136] and (2) prompt issuance of informal EPA guidance confirming that permitting authorities, if currently undertaking permit renewal or issuance, have broad discretion to set compliance deadlines under the Rule spanning the entire compliance window based on the four factors enumerated in 40 C.F.R. § 423.11(t) and are not obligated to impose a compliance deadline based on the initial deadline of July 8, 2024, due, in part, to EPA's decision to reconsider the substantive requirements of the 2024 ELG Rule.

- **Reconsider the 2024 ELG Rule.** EPA should reconsider the 2024 ELG Rule to determine whether zero-discharge technologies meet the CWA requirements of "available" and "economically achievable" to treat FGDW or CRL.
- **Repeal or Revise the 2024 ELG Rule.** If EPA finds that zero-discharge technologies on which the 2024 ELG Rule is based do not meet the CWA requirements of "available" and "economically achievable" to treat FGDW or CRL, EPA should repeal or revise the Rule.

SUMMARY OF RECOMMENDED ACTION ON THE 2024 RULE

EPA should repeal the 2024 ELG Rule. This petition describes the same legal flaws described in UWAG's brief in the ongoing litigation challenging the 2024 ELG Rule. If the

[136] *See* EPA, Oil Pollution Prevention and Response; Non-Transportation-Related Onshore and Offshore Facilities; Interim Final Rule, 68 Fed. Reg. 1348 (Jan. 9, 2003) (postponing requirements that had gone into effect in August 2002 without notice-and-comment under the good cause exemption on the basis of impending deadlines that would no longer be appropriate once EPA finished revising the underlying rule)

court rules in UWAG's favor, the presumptive result would be an order setting aside the Rule—the equivalent of a repeal. *See* 5 U.S.C. § 706(2) ("court shall … hold unlawful and set aside agency action, findings, and conclusions found to be … arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right," or "without observance of procedure required by law"). A repeal would result in a return to EPA's 2020 Rule issued under the first Trump Administration and could be accomplished efficiently by EPA.

If EPA determines that rulemaking to revise portions of the Rule rather than repeal of the 2024 ELG Rule in its entirety is necessary, UWAG urges EPA to make the following modifications to each wastestream:

FGDW BAT Limits. Revert to the 2020 BAT limits. Repeal the 2024 BAT limits to reflect that zero-discharge technologies are not currently available or economically achievable for FGDW. For example, remove the zero-discharge requirements added by the 2024 ELG Rule (at 40 C.F.R. § 423.13(g)(4)) and maintain 2020 Rule requirements (at 40 C.F.R. § 423.13(g)(1)-(3)), including generally applicable FGDW limits based on chemical precipitation followed by low hydraulic residence biological treatment.

CRL BAT Limits. Repeal the 2024 BAT limits, including the unmanaged CRL subcategory and do not establish a nationwide limit so that discharges of CRL are subject to the permitting authority's best professional judgment (BPJ). In addition to the reasons described above, this approach would be justified in light of the variations in quantity of flow and pollutant loadings following landfill or impoundment closure.

BATW BAT Limits. Revert to the 2020 BAT limits. Repeal the 2024 BAT limits (at 40 C.F.R. § 423.13(k)(4)) and maintain EPA's 2020 determination that a high-recycle rate system

with a 10 percent volumetric purge under the 2020 Rule criteria is the appropriate model technology for BATW BAT limits.

Legacy Wastewater BAT Limits. Repeal the 2024 BAT limits and do not establish a nationwide limit so that discharges of legacy wastewater are subject to the permitting authority's BPJ.

Pretreatment Standards for Existing Sources (PSES). Repeal the 2024 PSES limits for FGDW, BATW, and CRL and revert to the 2020 PSES limits for FGDW and BATW.

CONCLUSION

For all the foregoing reasons, EPA should grant this petition, stay the Final ELG Rule, take other administrative action to suspend the 2024 ELG Rule's existing compliance deadlines, and promptly undertake a new rulemaking to reconsider the 2024 ELG Rule.

Dated: February 21, 2025

Respectfully submitted,

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